

**Notice of Allowability**

Application No.

10/623,392

Examiner

Khiem D. Nguyen

Applicant(s)

HADIZAD, PEYMAN

Art Unit

2823

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 04/06/06.
2. ☒ The allowed claim(s) is/are 1-6, 8-13 and 15-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

**HSIEN-MING LEE**  
**PRIMARY EXAMINER**K.N.  
April 19, 2006

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's Amendment was given in a telephone communication with Mr. Kevin B. Jackson, Reg. No. 38,502 on April 18<sup>th</sup>, 2006 and the Applicant's proposed amendments to claims 1, 12 and 18 for an Examiner's Amendment faxed to the Examiner on April 19<sup>th</sup>, 2006.

The application has been amended as follows:

In claim:

In independent claim 1, line 2, after "semiconductor", delete "vertical trench gate junction FET".

In independent claim 1, line 7, after "upper surface", insert --wherein a portion of the body of semiconductor material forms a drain region, and--

In independent claim 1, line 26, after "device", insert --and wherein the drain region, the first source region, and the doped trench gate region form a vertical junction FET device--.

In independent claim 12, line 2, after "semiconductor", delete "vertical trench gate junction FET".

In independent claim 12, line 26, after "compound semiconductor layer", insert --to form a vertical doped trench gate compound semiconductor junction FET device--.

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In independent claim 18, line 2, after “semiconductor”, delete “trench gate junction FET”.

In independent claim 18, line 32, after “support wafer”, insert --to form a vertical trench gate compound semiconductor junction FET device--.

***Allowable Subject Matter***

Claims 1-6, 8-13, and 15-20 are allowed.

***Reasons For Allowance***

The following is a statement of reasons for the indication of allowable subject matter: The prior art taken alone or in combination neither discloses nor makes obvious the instant process of claims as a whole. Specifically, the prior art of record, Blanchard (U.S. Patent 6,686,244) does not teach or suggest a method of making a trench gate JFET device having the step of introducing a dopant of a second conductivity type into at least a portion of the second sidewalls and the second bottom surface to form a doped trench gate region, wherein the doped trench gate region extends into the body of semiconductor material.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khiem D. Nguyen whose telephone number is (571) 272-1865. The examiner can normally be reached on Monday-Friday (8:30 AM - 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

K.N.  
April 19<sup>th</sup>, 2006

HSIEN-MING LEE  
PRIMARY EXAMINER

4/26/06